



UC Leuven
Limburg
MOVING MINDS

L1 varieties in Flemish secondary education: Teachers' attitudes toward standard and substandard colloquial Belgian Dutch

Jose Tummers^{1,2}, Annelies Deveneyns¹, Dirk Speelman²

¹ UC Leuven-Limburg

² KU Leuven



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1. Problem statement

- **Language situation in Flanders** (Geeraerts 2010; Grondelaers & Hout 2011)
 - **Standard** variety: Belgian Dutch (BD)
 - **Substandard** variety: Colloquial Belgian Dutch (CBD) = in-between language
- **Colloquial Belgian Dutch: intensively studied last decades**
 - **Structural and formal properties** (Geeraerts et al. 1999, 2000; Goossens 1973, 2000; Haeseryn 1996; Plevoets 2008; Taeldeman 1992)
 - **Usage settings** (De Caluwe 2003; Van Gijssel et al. 2008; Zenner et al. 2008)
 - **Social value** (Plevoets 2012)



1. Problem statement

- **Double caveat**
 - **Little attitudinal research** (Geeraerts 2001; Impe 2010; Impe & Speelman 2007)
 - **Little research about position Belgian Dutch varieties in education** (Delarue 2011)
- **Belgian Dutch in Flemish education**
 - **Flemish Government considers only BD as school language** (Smet 2011; Vandenbroucke 2007)
 - **Twofold paradox** (Delarue 2011) ⇒ **Is strict official position a 'judicial fiction'?**
 - Very strict policy (BD/~~CBD~~) vs. vague final qualifications secondary education
 - Very strict policy vs. classroom situation (warning: anecdotal methodology)



2. Research questions

1. Language **perception**

Do teachers in secondary education recognize both varieties of Belgian Dutch (as formal and informal variety)?

2. Language **attitudes**

What are teachers' language attitudes toward both varieties of Belgian Dutch?



3. Methodology

- **Field experiment** in schools: respondents/teachers are presented stimuli
- Indirect technique to elicit attitudes: "**speaker evaluation**" (Lambert et al. 1960; Kristiansen 2003, 2009)
- Stimuli: 4 stimuli (+/-20 sec) per respondent

	Belgian Dutch (Standard variety)	Colloquial Belgian Dutch (Substandard variety)
Central region	Stimulus 1	Stimulus 2
Respondent's region	Stimulus 3	Stimulus 4



3. Methodology

- **Selection of stimuli**

- Authentic instead of constructed stimuli (Grondelaers et al. 2009)
- Excerpted from *Spoken Dutch Corpus* (Oostdijk 2004)
- Controlled for paralinguistic properties (2 researchers, 7-point Likert scales)
 - Sociolinguistic properties speaker: male, higher educated, aged 35-50, region birth/education/living
 - Fluency (Grondelaers et al. To appear)
 - Presence of dialectal accent (Grondelaers et al. To appear; Van Bezooijen 2002)
 - Timbre (Garrett 2005; Van Bezooijen 2002)
 - Pitch (Garrett 2005)
 - Loudness (Garrett 2005)



3. Methodology

- **Classification of stimuli**

- **Colloquialness score** based on the proportion of Colloquial Belgian Dutch linguistic features
 - Pronunciation – e.g. *da(t)*, *wa(t)*, *goe(d)*, *(h)eten*, regional/dialectal accents
 - Lexicon – e.g. *kop/tas*, *leuk/plezant*, regional variants
 - Grammar – *jij/gij*, *je/ge*, *de boek*, *boekske*, *nen schonen hond*

	Central region	Region V1	Region V2	Region V3	Region V4
BD	n = 65 n _{CBD} = 0	n = 55 n _{CBD} = 0	n = 68 n _{CBD} = 1	n = 53 n _{CBD} = 1	n = 36 n _{CBD} = 0
CBD	n = 81 n _{CBD} = 28	n = 80 n _{CBD} = 42	n = 79 n _{CBD} = 48	n = 75 n _{CBD} = 19	n = 89 n _{CBD} = 31



3. Methodology

- **Attitudes**

- Measured by means of multi-item 7-point Likert scales; 23 items
- **Status / competence** – (4) – success, rich, highly educated, intelligent
- **Dynamism** – (5) – active, extraverted, convincing, leadership, enthusiasm
- **Solidarity / social attraction** – (4) – friendly, genial, careful, humoristic
- **Personal integrity** – (3) – reliable, good person
- **Norm sensitivity** – (3) – prime-minister, tv-journal, spokesperson
- **School situations** – (3) – teaching, communication with colleagues, representation to parents

(Garrett, 2001; Grondelaers et al. 2009; Impe & Speelman 2007; Ray & Zahn 1999; Zahn & Hopper, 1985)



3. Methodology

- **Sample composition**

- Field experiment in schools
 - 42 schools
 - 322 respondents (teachers and head masters)
- 'Guided' random sample based on official list of secondary school
 - Willingness to participate
 - Only secondary schools
- Presentation
 - Researchers from teachers training department
 - Experiment presented as part of project about authentic teaching materials



4. Analysis

1. Reliability of multi-item scales
2. RQ1: language perception
3. RQ2: language attitudes

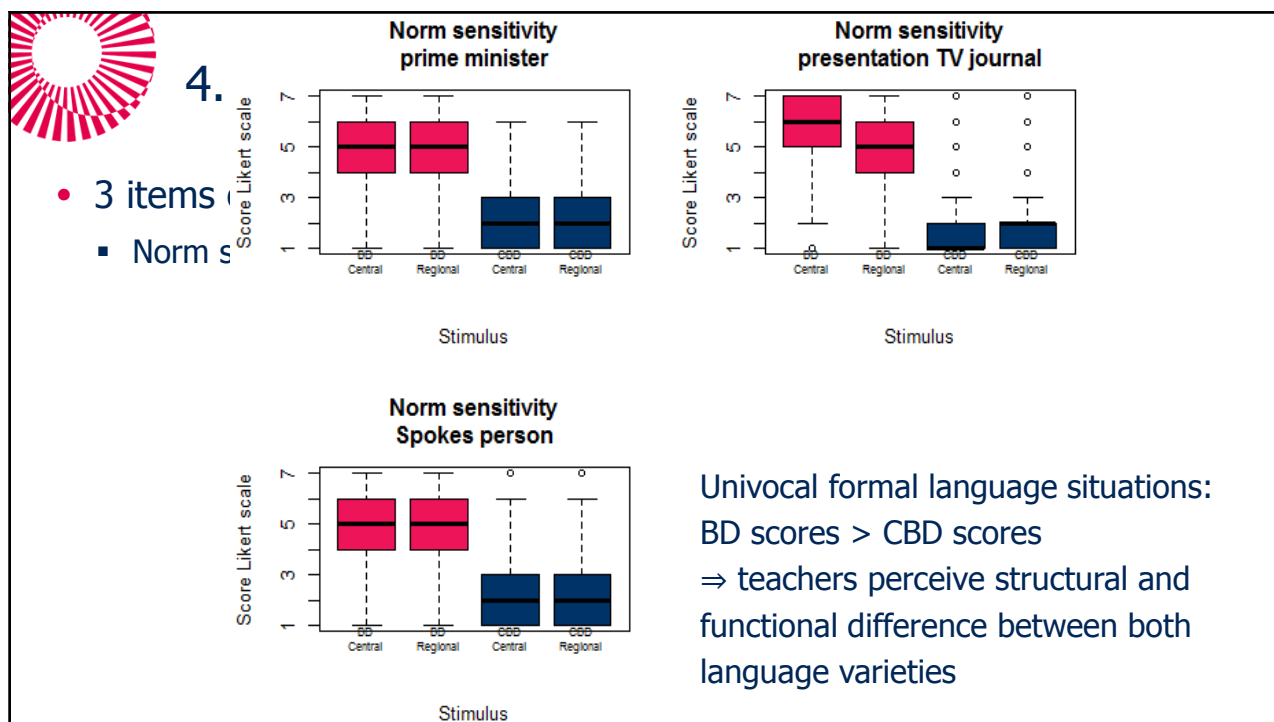
`psych` library in R (Revelle 2014)

`effects` library in R (Fox 2007)



4. Analysis – reliability of multi-item scales

- Cronbach's alpha
 - Status / competence $\alpha = 0.89$
 - Dynamism $\alpha = 0.82$
 - Solidarity / social attraction $\alpha = 0.80$ (!item 13!)
 - Personal integrity $\alpha = 0.81$ (!item 16!)
 - Norm sensitivity $\alpha = 0.91$
 - School situations $\alpha = 0.91$
- Conclusion: reliable instrument to measure attitudes



4. Analysis – language perception

- 3 items on norm sensitivity – **sociolinguistic differences**
 - Diploma:** secondary education ⇒ more conservative judgment toward CBD stimuli (Median = 1 compared to 2)
 - Age:** > 45 ⇒ more conservative judgment toward BD stimuli (Median = 5 compared to 6)
 - Region school:** peripheral regions more conservative than central region toward BD
 - Attitude towards importance usage BD in school** (5 merged 7-point scales): lowest importance (scores 1 or 2) ⇒ less neat distinction between BD and CBD



4. Analysis – language attitudes – EFA

- Exploratory Factor Analysis – **model construction**
 - Prerequisites: not identity matrix, multivariate normality, sample size
 - Solution with 4 factors: Evaluative measures stabilize and/or reach acceptable values from 4 factors onward
 - Factorizing method = maximum likelihood
 - Rotation = oblique (oblimin) – $\text{cor}(\text{ML1}, \text{ML3}) = 0.60$
(Fabregar et al. 1999; Field 2000; Rietveld & Hout 1993)



4. Analysis – language attitudes – EFA

- Exploratory Factor Analysis – **model evaluation / model fit**
 - Cumulative variance explained = 0.65
 - Reproduction of correlation matrix by factor model: 0.9672 (0.9967 for off-diagonal)
 - TLI of factoring reliability = 0.91 (≥ 0.90) (Browne & Cudek 1993)
 - RMSEA = 0.076 [0.072;0.079] (≤ 0.08 is acceptable)
- Exploratory Factor Analysis – **factor loadings**



	ML1	ML2	ML3	ML4	h2
vr.1	0.11	0.08	0.77	0.07	0.75
vr.2	0.01	0.01	0.78	0.07	0.65
vr.3	0.60	0.00	0.42	-0.11	0.79
vr.4	0.50	0.11	0.44	0.00	0.74
vr.5	0.16	0.08	0.25	0.57	0.63
vr.6	0.02	-0.06	0.26	0.55	0.42
vr.7	0.46	0.00	0.23	0.35	0.64
vr.8	0.08	0.01	0.61	0.28	0.61
vr.9	0.04	0.31	0.08	0.52	0.55
vr.10	0.06	0.63	-0.03	0.09	0.46
vr.11	0.12	0.65	-0.21	0.23	0.63
vr.12	-0.12	0.83	-0.01	0.02	0.68
vr.13	-0.09	0.36	-0.18	0.39	0.37
vr.14	0.01	0.75	0.23	-0.05	0.61
vr.15	0.06	0.81	0.01	-0.09	0.63
vr.16	0.32	0.46	0.10	-0.11	0.37
vr.17	-0.06	0.83	0.02	0.03	0.69
vr.18	0.67	-0.04	0.27	-0.07	0.70
vr.19	0.87	-0.03	0.04	-0.09	0.75
vr.20	0.79	-0.15	0.17	0.05	0.80
vr.21	0.86	0.10	-0.14	0.10	0.71
vr.22	0.90	-0.01	-0.07	0.12	0.80
vr.23	0.89	0.09	-0.07	-0.03	0.75



	ML1	ML2	ML3	ML4	h2
vr.1	0.11	0.08	0.77	0.07	0.75
vr.2	0.01	0.01	0.78	0.07	0.65
vr.3	0.60	0.00	0.42	-0.11	0.79
vr.4	0.50	0.11	0.44	0.00	0.74
vr.5	0.16	0.08	0.25	0.57	0.63
vr.6	0.02	-0.06	0.26	0.55	0.42
vr.7	0.46	0.00	0.23	0.35	0.64
vr.8	0.08	0.01	0.61	0.28	0.61
vr.9	0.04	0.31	0.08	0.52	0.55
vr.10	0.06	0.63	-0.03	0.09	0.46
vr.11	0.12	0.65	-0.21	0.23	0.63
vr.12	-0.12	0.83	-0.01	0.02	0.68
vr.13	-0.09	0.36	-0.18	0.39	0.37
vr.14	0.01	0.75	0.23	-0.05	0.61
vr.15	0.06	0.81	0.01	-0.09	0.63
vr.16	0.32	0.46	0.10	-0.11	0.37
vr.17	-0.06	0.83	0.02	0.03	0.69
vr.18	0.67	-0.04	0.27	-0.07	0.70
vr.19	0.87	-0.03	0.04	-0.09	0.75
vr.20	0.79	-0.15	0.17	0.05	0.80
vr.21	0.86	0.10	-0.14	0.10	0.71
vr.22	0.90	-0.01	-0.07	0.12	0.80
vr.23	0.89	0.09	-0.07	-0.03	0.75

Refit model after omission of items
vr.13 and vr.16 which are not well
represented by the underlying factors
(cf. Cronbach's alpha)

- vr.13 *This person has a sense of humor*
- vr.16 *I would tell a secret to this person*




4. Analysis – language attitudes – EFA


- Exploratory Factor Analysis – **model evaluation refitted model**
 - Cumulative variance explained = 0.67
 - Reproduction of correlation matrix by factor model: 0.9731 (0.9977 for off-diagonal)
 - TLI of factoring reliability = 0.92
 - RMSEA = 0.077 [0.073;0.080]
- Exploratory Factor Analysis – **factor loadings refitted model**




		ML1	ML2	ML3	ML4	h2
Prestige / Competence	vr.1	0.11	0.08	0.76	0.09	0.77
	vr.2	0.01	0.00	0.76	0.11	0.66
	vr.3	0.62	0.00	0.41	-0.08	0.79
	vr.4	0.51	0.10	0.41	0.04	0.73
	vr.5	0.11	0.07	0.11	0.69	0.67
Dynamism	vr.6	-0.02	-0.07	0.14	0.62	0.43
	vr.7	0.44	0.00	0.16	0.39	0.64
	vr.8	0.07	0.00	0.53	0.35	0.60
	vr.9	0.00	0.32	-0.01	0.56	0.54
Solidarity / Social attraction	vr.10	0.06	0.64	-0.01	0.04	0.45
	vr.11	0.10	0.67	-0.20	0.19	0.61
	vr.12	-0.11	0.83	-0.01	0.02	0.68
Personal integrity	vr.14	0.03	0.73	0.21	-0.01	0.59
	vr.15	0.07	0.81	0.04	-0.10	0.63
	vr.17	-0.05	0.83	0.01	0.03	0.70
Norm sensitivity	vr.18	0.68	-0.04	0.27	-0.05	0.70
	vr.19	0.88	-0.03	0.03	-0.06	0.75
	vr.20	0.79	-0.16	0.13	0.09	0.80
School contexts	vr.21	0.84	0.11	-0.13	0.07	0.70
	vr.22	0.88	-0.01	-0.09	0.13	0.80
	vr.23	0.89	0.10	-0.05	-0.05	0.75




		ML1	ML2	ML3	ML4	h2	
Prestige / Competence	vr.1	0.11	0.08	0.76	0.09	0.77	Factor ML1 (27% var) • Teachers associate school contexts with the use of the BD norm. • People perceived apt to be a teacher are considered highly educated, intelligent and convincing.
	vr.2	0.01	0.00	0.76	0.11	0.66	
	vr.3	0.62	0.00	0.41	-0.08	0.79	
	vr.4	0.51	0.10	0.41	0.04	0.73	
	vr.5	0.11	0.07	0.11	0.69	0.67	
Dynamism	vr.6	-0.02	-0.07	0.14	0.62	0.43	<i>vr.3 This person enjoyed higher education</i> <i>vr.4 This person is intelligent</i> <i>vr.7 This person can convince people in a discussion</i>
	vr.7	0.44	0.00	0.16	0.39	0.64	
	vr.8	0.07	0.00	0.53	0.35	0.60	
	vr.9	0.00	0.32	-0.01	0.56	0.54	
Solidarity / Social attraction	vr.10	0.06	0.64	-0.01	0.04	0.45	
	vr.11	0.10	0.67	-0.20	0.19	0.61	
	vr.12	-0.11	0.83	-0.01	0.02	0.68	
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School contexts	vr.21	0.84	0.11	-0.13	0.07	0.70	
	vr.22	0.88	-0.01	-0.09	0.13	0.80	
	vr.23	0.89	0.10	-0.05	-0.05	0.75	



		ML1	ML2	ML3	ML4	h2	
Prestige / Competence	vr.1	0.11	0.08	0.76	0.09	0.77	Factor ML2 (18% Var) • Solidarity • Personal integrity
	vr.2	0.01	0.00	0.76	0.11	0.66	
	vr.3	0.62	0.00	0.41	-0.08	0.79	
	vr.4	0.51	0.10	0.41	0.04	0.73	
	vr.5	0.11	0.07	0.11	0.69	0.67	
Dynamism	vr.6	-0.02	-0.07	0.14	0.62	0.43	
	vr.7	0.44	0.00	0.16	0.39	0.64	
	vr.8	0.07	0.00	0.53	0.35	0.60	
	vr.9	0.00	0.32	-0.01	0.56	0.54	
Solidarity / Social attraction	vr.10	0.06	0.64	-0.01	0.04	0.45	
	vr.11	0.10	0.67	-0.20	0.19	0.61	
	vr.12	-0.11	0.83	-0.01	0.02	0.68	
Personal integrity	vr.14	0.03	0.73	0.21	-0.01	0.59	
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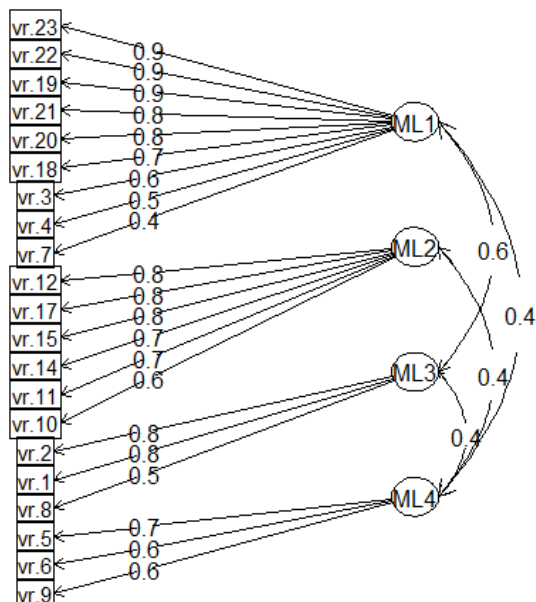
		ML1	ML2	ML3	ML4	h2	
Prestige / Competence	vr.1	0.11	0.08	0.76	0.09	0.77	Factor ML3 (12% Var) • Prestige / Competence • Ambition
	vr.2	0.01	0.00	0.76	0.11	0.66	
	vr.3	0.62	0.00	0.41	-0.08	0.79	
	vr.4	0.51	0.10	0.41	0.04	0.73	
Dynamism	vr.5	0.11	0.07	0.11	0.69	0.67	<i>vr.8 This person wants to succeed in life</i>
	vr.6	-0.02	-0.07	0.14	0.62	0.43	
	vr.7	0.44	0.00	0.16	0.39	0.64	
	vr.8	0.07	0.00	0.53	0.35	0.60	
	vr.9	0.00	0.32	-0.01	0.56	0.54	
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	vr.22	0.88	-0.01	-0.09	0.13	0.80	
	vr.23	0.89	0.10	-0.05	-0.05	0.75	



		ML1	ML2	ML3	ML4	h2	
Prestige / Competence	vr.1	0.11	0.08	0.76	0.09	0.77	Factor ML4 (10% Var) • Dynamism
	vr.2	0.01	0.00	0.76	0.11	0.66	
	vr.3	0.62	0.00	0.41	-0.08	0.79	
	vr.4	0.51	0.10	0.41	0.04	0.73	
Dynamism	vr.5	0.11	0.07	0.11	0.69	0.67	
	vr.6	-0.02	-0.07	0.14	0.62	0.43	
	vr.7	0.44	0.00	0.16	0.39	0.64	
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	vr.9	0.00	0.32	-0.01	0.56	0.54	
Solidarity / Social attraction	vr.10	0.06	0.64	-0.01	0.04	0.45	
	vr.11	0.10	0.67	-0.20	0.19	0.61	
	vr.12	-0.11	0.83	-0.01	0.02	0.68	
Personal integrity	vr.14	0.03	0.73	0.21	-0.01	0.59	
	vr.15	0.07	0.81	0.04	-0.10	0.63	
	vr.17	-0.05	0.83	0.01	0.03	0.70	
Norm sensitivity	vr.18	0.68	-0.04	0.27	-0.05	0.70	
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	vr.20	0.79	-0.16	0.13	0.09	0.80	
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	vr.23	0.89	0.10	-0.05	-0.05	0.75	

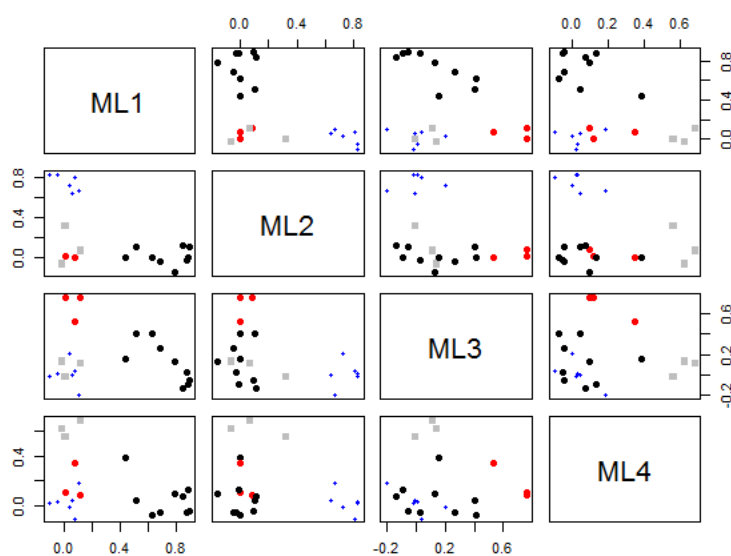


4. Analysis – language attitudes – EFA



4. Analysis – language attitudes – EFA

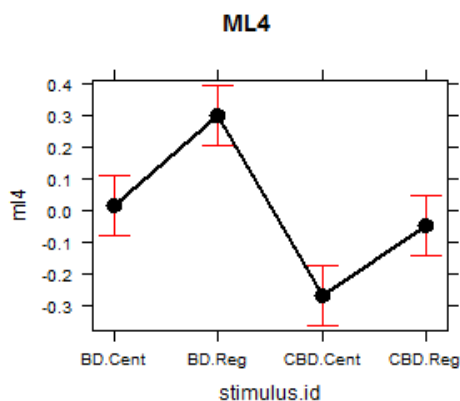
Factor Analysis





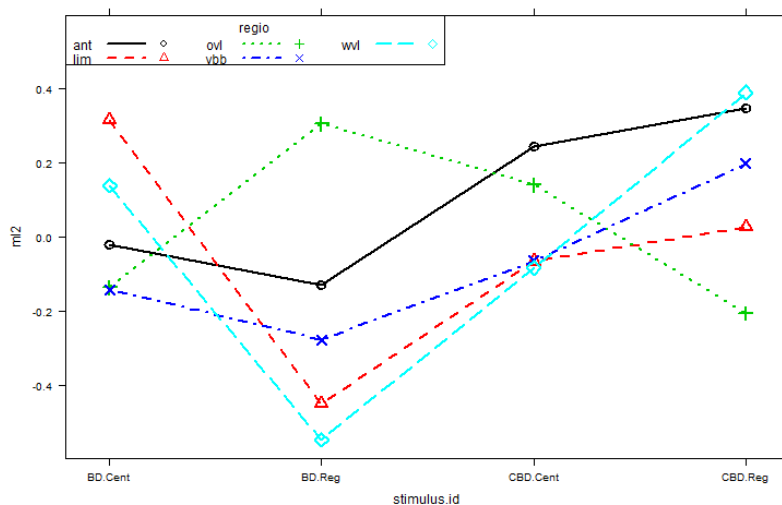
4. Analysis – language attitudes – EFA

- All factors are significantly constrained by stimulus: BD.Central, BD.Regional, CBD.Central, CBD.Regional



4. Analysis – language attitudes – EFA

- Factors ML2: significant interaction stimulus * region (Impe & Speelman 2007)





4. Analysis – language attitudes – sociolinguistic properties

- Fitted gaussian glm with respondent properties as explanatory variables
- `glm(mli ~ age.group + gender + region + diploma + importance.BD + teacher.dutch, data=db, family="gaussian")`

Factor	age.group	gender	region	diploma	import.BD	teach.Dutch
ML1	ns	ns	*	ns	ns	ns
ML2	**	ns	ns	***	ns	ns
ML3	***	ns	ns	***	ns	ns
ML4	ns	**	ns	***	ns	ns



4. Analysis – language attitudes – sociolinguistic properties

- Factor loadings **ML1** – intellectual and educated profile linked to norm sensitivity and (formal) school situations
 - Constant over all sociolinguistic groups
 - Region of living: lower scores for periphery compared to center
- Factor loadings **ML2** – solidarity and personal integrity
 - Diploma: secondary education diploma < higher education diploma
 - Age group: 45+ < 45-
- Factor loadings **ML3** – prestige / status
 - Diploma: secondary education diploma < higher education diploma
 - Age group: 45+ < 45-
- Factor loadings **ML4** – dynamism
 - Diploma: secondary education diploma < higher education diploma
 - Gender: female < male



5. Discussion

RQ1: language perceptions

- Teachers **perceive the difference** between BD and CBD
- Conservative judgments about suitability CBD: secondary education degree ⇒ language uncertainty
- Conservative attitude about suitability BD: (too) high expectation about standard language
 - Periphery
 - Older generation



5. Discussion

RQ2: language attitudes

- 4 factors
 - ML1 – intellectual and educated profile linked to norm sensitivity and formal school situations
 - ML2 – solidarity and personal integrity
 - ML3 – status / prestige + dynamism
 - ML4 – dynamism



5. Discussion

RQ2: language attitudes

- 4 factors
 - ML1 – intellectual and educated profile linked to norm sensitivity and formal school situations
 - Linked to BD
 - No sociolinguistic differentiation, except region of respondent
 - ML2 – solidarity and personal integrity
 - ML3 – status / prestige + dynamism
 - ML4 – dynamism



5. Discussion

RQ2: language attitudes

- 4 factors
 - ML1 – intellectual and educated profile linked to norm sensitivity and formal school situations
 - ML2 – solidarity and personal integrity
 - Linked to regional variety of CBD
 - Sociolinguistic profile: 45- and higher education diploma
 - ML3 – status / prestige + dynamism
 - ML4 – dynamism



5. Discussion

RQ2: language attitudes

- 4 factors
 - ML1 – intellectual and educated profile linked to norm sensitivity and formal school situations
 - ML2 – solidarity and personal integrity
 - ML3 – status / prestige + dynamism
 - Linked to BD
 - Sociolinguistic profile: 45- and higher education diploma
 - ML4 – dynamism



5. Discussion

RQ2: language attitudes

- 4 factors
 - ML1 – intellectual and educated profile linked to norm sensitivity and formal school situations
 - ML2 – solidarity and personal integrity
 - ML3 – status / prestige + dynamism
 - ML4 – dynamism
 - Linked to regional varieties
 - Sociolinguistic profile: 45- and male



5. Discussion

RQ2: language attitudes

- **Attitudinal profile** in line with literature overview
 - BD / standard variety ~ univocal formal situations, prestige / status, dynamism
 - CBD / substandard variety ~ social attraction / solidarity
- Teachers consider the **use of BD** as linked to the (self-)perceived intellectual dimension of their job
- **Social dimension of CBD**: less outspoken than in previous research < school context and professional self-perception of teachers
- **Personal integrity of peripheral CBD**: no corroboration of previous research < school context and professional self-perception of teachers
- Interesting difference between status/competence and dynamism



5. Discussion

Teacher's attitudes with respect to language policy of the Flemish Government

- Official language policy is not (necessarily) a 'judicial fiction'
- Secondary education teachers are well equipped to teach BD as well as difference in usage contexts between BD and CBD



5. Discussion

Further research

- Include school properties in sociolinguistic analysis
- Feed-back to actual language policy by government and schools

- Extensions
 - Primary education
 - Link between attitudes and actual language behavior



Further information

- UC Leuven-Limburg
<http://marco.khleuven.be>

- KU Leuven, RU Quantitative Lexicology and Variational Linguistics
<http://wwwling.arts.kuleuven.be/qlvl>

- Mail
 - Jose.Tummers@ucll.be
 - Annelies.Deveneyns@ucll.be
 - Dirk.Speelman@arts.kuleuven.be